

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 61128114  
PUBLICATION DATE : 16-06-86

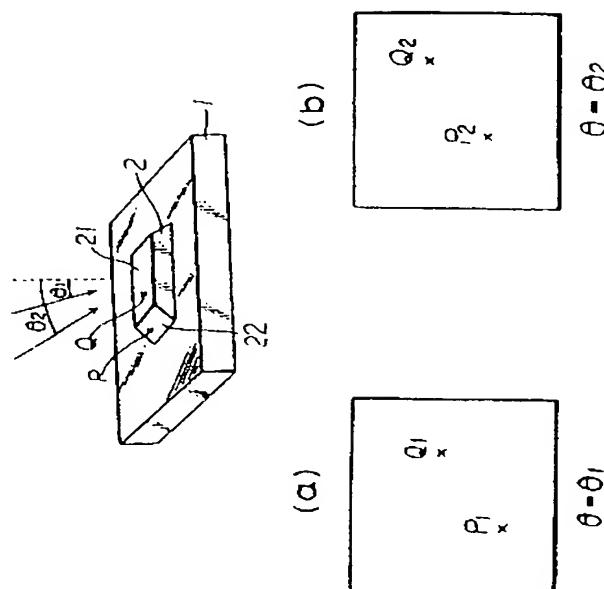
APPLICATION DATE : 27-11-84  
APPLICATION NUMBER : 59250105

APPLICANT : TOSHIBA CORP;

INVENTOR : OKUMURA KATSUYA;

INT.CL. : G01B 15/04 G06K 9/00 H01L 21/66

TITLE : EVALUATION OF SURFACE SHAPE OF PATTERN



ABSTRACT : PURPOSE: To enable non-destructive and easy evalution of a specimen, by scanning from a plurality of angles using an identifying mark on a pattern and determining a surface shape with correspondence to a plurality of image data.

CONSTITUTION: An identifying mark is applied by irradiation of a spot beam onto arbitrary points P, Q on a surface of a resist pattern 2 formed on a semiconductor wafer 1, electron beams are projected from angles  $\theta_1$ ,  $\theta_2$  from an electron-microscope and by 2-dimensional scanning, data are obtained as a 2-dimensional assembly of each projected point. The data of this single point represent luminance of the secondary electron from a signal point on the specimen and are treated as data of 2 bites and in these data, points P<sub>1</sub>, Q<sub>1</sub>, and P<sub>2</sub>, Q<sub>2</sub> which correspond to the marks P, Q are included and using these 2 points as the reference points, 1 against 1 correspondence is established. And, basing on data as well scanning angles brought to correspondence, a surface shape of the pattern is determined by calculation.

COPYRIGHT: (C)1986,JPO&Japio